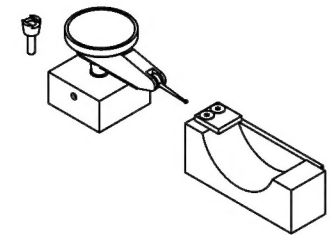
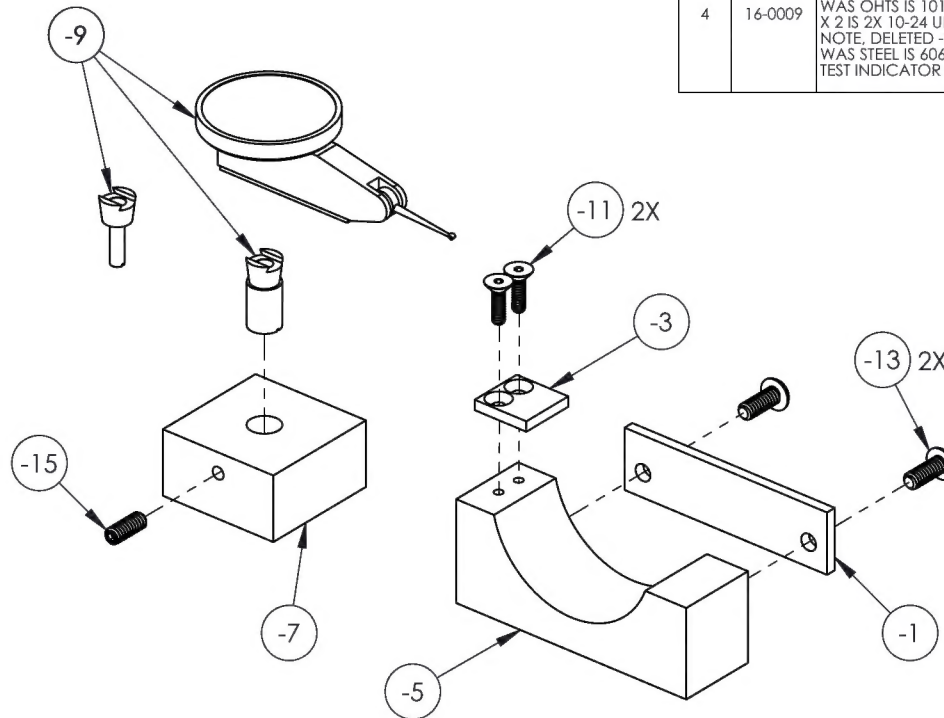


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| REVISIONS | | | | | |
|-----------|---------|---|------------|---------|----------|
| REV | ECR | DESCRIPTION | DATE | INITIAL | APPROVED |
| 1 | | -5 CH'D 6-32 HOLE LOCATION & LENGTH. -7 CH'D HEIGHT. | 8/14/2000 | | |
| 2 | | -5 CENTER OF R1.076 MOVED TO PART MIDPOINT. | 12/17/2003 | | |
| 3 | | -5 CH'D HOLE LOCATION FROM .46 TO .44. | 3/28/2006 | | |
| 3A | | CH'D TITLEBLOCK & REVISION BLOCK, CH'D REVISIONS TO NUMERICAL, MOVE -5 & -7 TO NEW SHEETS FOR CLARITY. | 7/16/2009 | RJC | |
| 3B | | ADDED NEEDLE NOTE, ACCEPTABLE TO CUT INTO SHAFT IF NEEDED. | 10/22/2012 | RJC | RW |
| 4 | 16-0009 | DELETED NOTE 1 SHT 1, -9, -11, -13, & -15. ADDED B/O INFO. -1 CH'D DIM WAS 2X Ø.190 THRU IS 2X Ø.201 THRU ALL, CH'D MATERIAL WAS CRS IS 1018/1020 CR. -3 ADDED MISSING DIM .18, CH'D DIM WAS 2X Ø.138 THRU ∇ 82° FOR 6-32 FLAT HEAD IS 2X Ø.15 THRU ALL ∇ Ø.30 X 82°. CH'D MATERIAL WAS OHTS IS 1018/1020 CR. DELETED SURFACE FINISH CALLOUT. -5 CH'D DIM WAS 10-24 NC .50 DEEP X 2 IS 2X 10-24 UNC -2B ∇ .50, WAS 6-32 NC .50 DEEP X2 IS 2X 6-32 UNC -2B ∇ .50, ADDED ENGRAVE NOTE, DELETED -3 FROM THIS PART. CH'D MATERIAL WAS STEEL IS 1018/1020 CR. -7 CH'D MATERIAL WAS STEEL IS 6061, CH'D FINISH WAS BLACK OXIDE IS BLACK ANODIZE. -9 CH'D DESCRIPTION WAS TEST INDICATOR IS DIAL INDICATOR, ADDED NOTE ∇ 1 & (90° DIM). | 1/29/2016 | RJC | JAG |

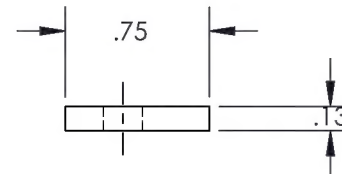
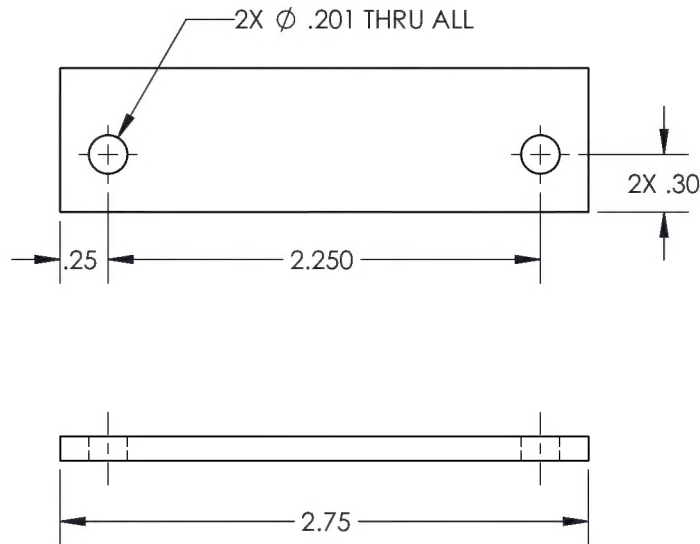
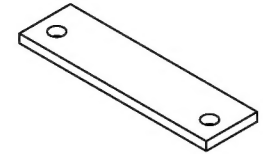


| ASSY QTY | ASSY QTY | B/O | Part # | UNIT QTY | Description | Material | B/O INFORMATION OR SPECIFICATIONS | PG. |
|----------|----------|-----|--------|----------|-----------------------------------|--------------|---|-----|
| | | | -1 | 1 | SIDE PLATE | 1018/1020 CR | | 2 |
| | | | -3 | 1 | BAR | 1018/1020 CR | | 3 |
| | | | -5 | 1 | BASE | 1018/1020 CR | | 4 |
| | | | -7 | 1 | INDICATOR BLOCK | 6061 | | 5 |
| | | | -9 | 1 | DIAL INDICATOR | | PAC-WEST TOOL #T1030 MODIFIED | 6 |
| | | B/O | -11 | 2 | FLAT HEAD SOCKET CAP SCREW | S.S | 6-32 X 1/2 (MCMaster-CARR #93791A457) | 1 |
| | | B/O | -13 | 2 | BUTTON HEAD SOCKET HEAD CAP SCREW | STEEL | #10-24 X 1/2 (MCMaster-CARR #91255A242) | 1 |
| | | B/O | -15 | 1 | SET SCREW | STEEL | #10-24 X 1/2 (MCMaster-CARR #91375A242) | 1 |
| | | B/O | -17 | 1 | SMALL PISTOL CASE | PLASTIC | RSR GROUP #10137 | N/S |

| | | | | | | | | | | | | | | | | | |
|---|---|-------|----------------------------|-------|--------------------------|--------|-----------------------------|--|------------------------|--|-------------------------|------|---|--|---|--|---|
| DART AEROSPACE | | | | | | | | | | | | | | | | | |
| TITLE TEST FIXTURE SPRAG CLUTCH | | | | | | | | | | | | | | | | | |
| DWG NO. RBT18612 | REV 4 | | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td>MAT'L</td> <td>UNLESS OTHERWISE SPECIFIED</td> </tr> <tr> <td>TREAT</td> <td>DIMENSIONS ARE IN INCHES</td> </tr> <tr> <td>FINISH</td> <td>.XXX ± .005 FRACTIONS ± 1/8</td> </tr> <tr> <td></td> <td>.XX ± .01 ANGLES ± .5°</td> </tr> <tr> <td></td> <td>.X ± .1 SURFACES = 125✓</td> </tr> <tr> <td>SPEC</td> <td>1. BREAK ALL SHARP EDGES .015 x 45° OR .015R</td> </tr> <tr> <td></td> <td>2. DIMENSIONAL LIMITS APPLY AFTER PLATING</td> </tr> <tr> <td></td> <td>3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009</td> </tr> </table> | | MAT'L | UNLESS OTHERWISE SPECIFIED | TREAT | DIMENSIONS ARE IN INCHES | FINISH | .XXX ± .005 FRACTIONS ± 1/8 | | .XX ± .01 ANGLES ± .5° | | .X ± .1 SURFACES = 125✓ | SPEC | 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R | | 2. DIMENSIONAL LIMITS APPLY AFTER PLATING | | 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009 |
| MAT'L | UNLESS OTHERWISE SPECIFIED | | | | | | | | | | | | | | | | |
| TREAT | DIMENSIONS ARE IN INCHES | | | | | | | | | | | | | | | | |
| FINISH | .XXX ± .005 FRACTIONS ± 1/8 | | | | | | | | | | | | | | | | |
| | .XX ± .01 ANGLES ± .5° | | | | | | | | | | | | | | | | |
| | .X ± .1 SURFACES = 125✓ | | | | | | | | | | | | | | | | |
| SPEC | 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R | | | | | | | | | | | | | | | | |
| | 2. DIMENSIONAL LIMITS APPLY AFTER PLATING | | | | | | | | | | | | | | | | |
| | 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009 | | | | | | | | | | | | | | | | |
| DRAWN BY: CLOUGH | USED ON MODEL MD | | | | | | | | | | | | | | | | |
| CHECKED: DUERFELDT | | | | | | | | | | | | | | | | | |
| OPPS APPR: ANDERSON | | | | | | | | | | | | | | | | | |
| QA APPR: LINDSAY | | | | | | | | | | | | | | | | | |
| APPROVED: GILBERT | | | | | | | | | | | | | | | | | |
| SCALE 2:1 | DATE 1/29/2016 | | | | | | | | | | | | | | | | |
| SHEET 1 OF 6 | | | | | | | | | | | | | | | | | |

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| REVISIONS | | | | | |
|-----------|---------|--|-----------|---------|----------|
| REV | ECR | DESCRIPTION | DATE | INITIAL | APPROVED |
| 4 | 16-0009 | -1 CH'D DIM WAS 2X Ø.190 THRU IS 2X Ø.201 THRU ALL, CH'D MATERIAL WAS CRS IS 1018/1020 CR. | 1/29/2016 | RJC | JAG |

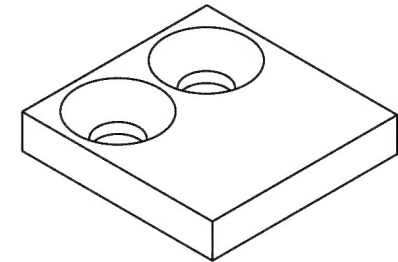
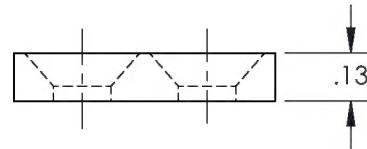
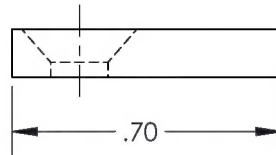
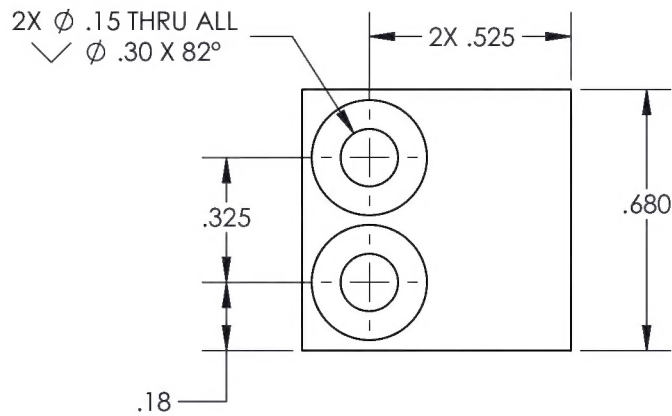


(-1)
SIDE PLATE

| | |
|---|------------------------------|
| DART AEROSPACE | |
| TITLE TEST FIXTURE SPRAG CLUTCH | |
| DWG NO. RBT18612-1 | REV 4 |
| MAT'L 1018/1020 CR | UNLESS OTHERWISE SPECIFIED |
| HEAT TREAT | DIMENSIONS ARE IN INCHES |
| FINISH BLACK OXIDE | .XXX ± .005 FRACTIONS ± 1/8 |
| SPEC | .XX ± .01 ANGLES ± 5° |
| | .X ± .1 SURFACES = 125° |
| DRAWN BY: CLOUGH | 1. BREAK ALL SHARP EDGES |
| CHECKED: DUERFELDT | .015 x 45° OR .015R |
| OPPS APPR: ANDERSON | 2. DIMENSIONAL LIMITS APPLY |
| QA APPR: LINDSAY | AFTER PLATING |
| APPROVED: GILBERT | 3. INTERPRET DIM AND TOL PER |
| | ASME Y14.5M-2009 |
| | USED ON MODEL |
| | MD |
| SCALE 1:1 | DATE 1/29/2016 |
| | SHEET 2 OF 6 |

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| REVISIONS | | | | | |
|-----------|---------|---|-----------|---------|----------|
| REV | ECR | DESCRIPTION | DATE | INITIAL | APPROVED |
| 4 | 16-0009 | -3 ADDED MISSING DIM .18, CH'D DIM WAS 2X Ø.138 THRU $\sqrt{\text{V}}$ 82° FOR 6-32 FLAT HEAD IS 2X Ø.15 THRU ALL $\sqrt{\text{V}}$ Ø.30 X 82°, CH'D MATERIAL WAS OHTS IS 1018/1020 CR, DELETED SURFACE FINISH CALLOUT. | 1/29/2016 | RJC | JAG |

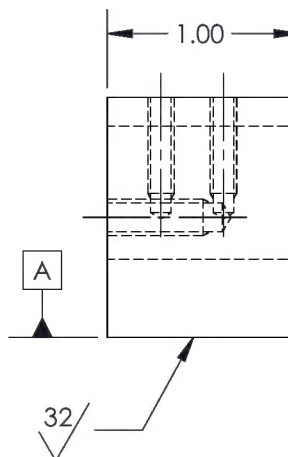
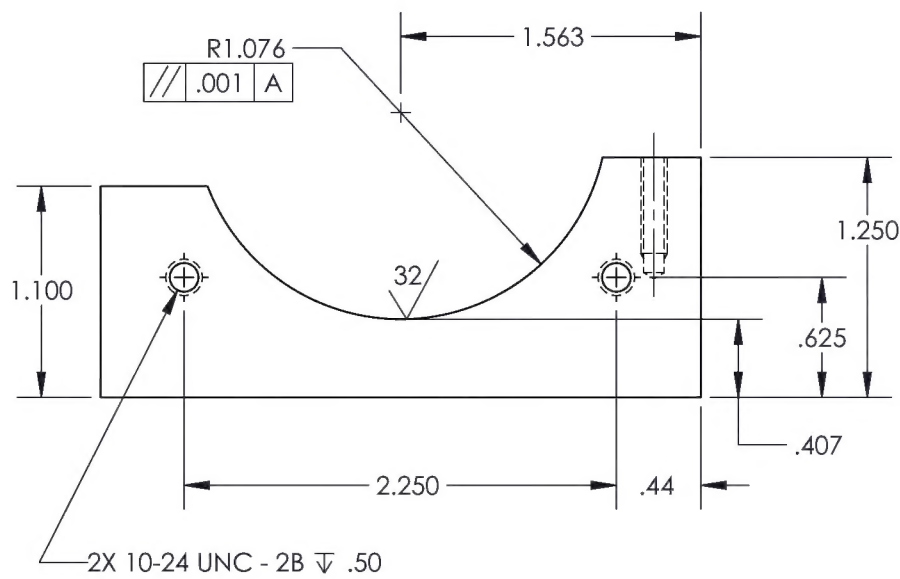
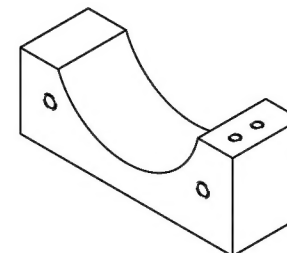
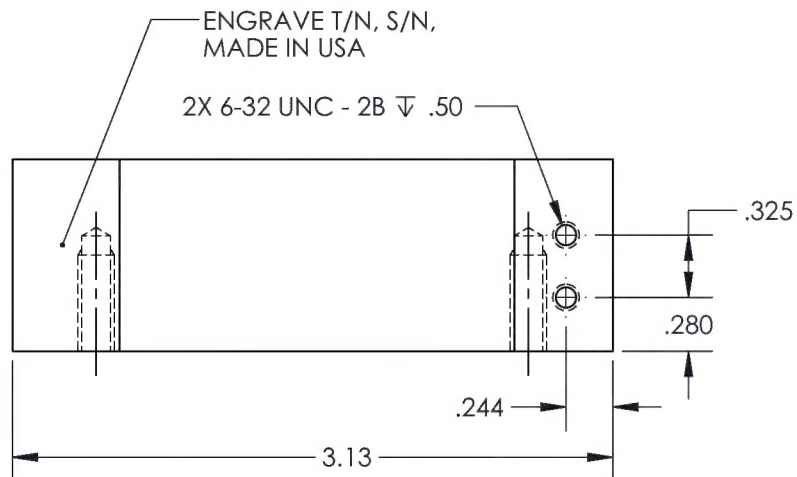


(-3)
 BAR

| | |
|---|------------------------------|
| DART AEROSPACE | |
| TITLE TEST FIXTURE SPRAG CLUTCH | |
| DWG NO. RBT18612-3 | REV 4 |
| MAT'L 1018/1020 CR | UNLESS OTHERWISE SPECIFIED |
| HEAT TREAT | DIMENSIONS ARE IN INCHES |
| FINISH BLACK OXIDE | .XXX ± .005 FRACTIONS ± 1/8 |
| SPEC | .XX ± .01 ANGLES ± 5° |
| | .X ± .1 SURFACES = 125° |
| DRAWN BY: CLOUGH | 1. BREAK ALL SHARP EDGES |
| CHECKED: DUERFELDT | .015 x 45° OR .015R |
| OPPS APPR: ANDERSON | 2. DIMENSIONAL LIMITS APPLY |
| QA APPR: LINDSAY | AFTER PLATING |
| APPROVED: GILBERT | 3. INTERPRET DIM AND TOL PER |
| | ASME Y14.5M-2009 |
| | USED ON MODEL |
| | MD |
| SCALE 2:1 | DATE 1/29/2016 |
| | SHEET 3 OF 6 |

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| REVISIONS | | | | | |
|-----------|---------|--|------------|---------|----------|
| REV | ECR | DESCRIPTION | DATE | INITIAL | APPROVED |
| 1 | | -5 CH'D 6-32 HOLE LOCATION & LENGTH. | 8/14/2000 | | |
| 2 | | -5 CENTER OF R1.076 MOVED TO PART MIDPOINT. | 12/17/2003 | | |
| 3 | | -5 CH'D HOLE LOCATION FROM .46 TO .44. | 3/28/2006 | | |
| 4 | 16-0009 | -5 CH'D DIM WAS 10-24 NC .50 DEEP X 2 IS 2X 10-24 UNC -2B ∇ .50, WAS 6-32 NC .50 DEEP X2 IS 2X 6-32 UNC -2B ∇ .50, ADDED ENGRAVE NOTE, DELETED -3 FROM THIS PART, CH'D MATERIAL WAS STEEL IS 1018/1020 CR. | 1/29/2016 | RJC | JAG |

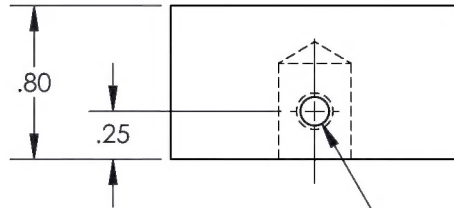
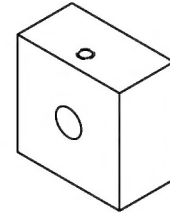


(5)
BASE

| | |
|---|-------------------------------------|
| DART AEROSPACE | |
| TITLE TEST FIXTURE SPRAG CLUTCH | |
| DWG NO. RBT18612-5 | REV 4 |
| MAT'L 1018/1020 CR | UNLESS OTHERWISE SPECIFIED |
| HEAT TREAT | DIMENSIONS ARE IN INCHES |
| FINISH BLACK OXIDE | .XXX \pm .005 FRACTIONS \pm 1/8 |
| SPEC | .XX \pm .01 ANGLES \pm 5° |
| | .X \pm .1 SURFACES = 125° |
| DRAWN BY: CLOUGH | 1. BREAK ALL SHARP EDGES |
| CHECKED: DUERFELDT | .015 x 45° OR .015R |
| OPPS APPR: ANDERSON | 2. DIMENSIONAL LIMITS APPLY |
| QA APPR: LINDSAY | AFTER PLATING |
| APPROVED: GILBERT | 3. INTERPRET DIM AND TOL PER |
| | ASME Y14.5M-2009 |
| SCALE 1:1 | DATE 1/29/2016 |
| | USED ON MODEL MD |
| | SHEET 4 OF 6 |

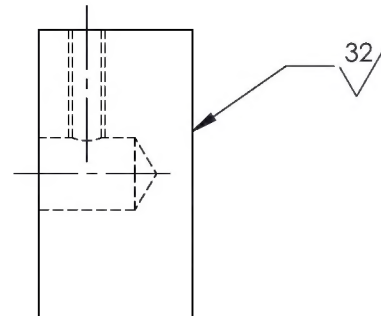
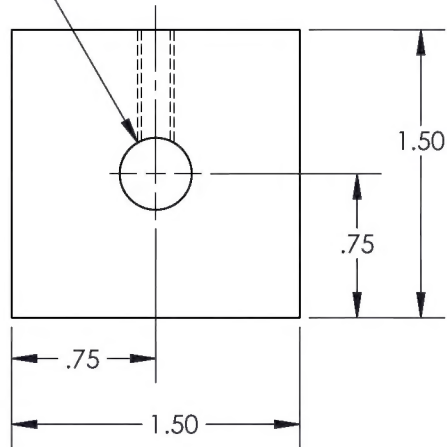
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| REVISIONS | | | | | |
|-----------|---------|---|-----------|---------|----------|
| REV | ECR | DESCRIPTION | DATE | INITIAL | APPROVED |
| 1 | | -7 CH'D HEIGHT. | 8/14/2000 | | |
| 4 | 16-0009 | -7 CH'D MATERIAL WAS STEEL IS 6061, CH'D FINISH WAS BLACK OXIDE IS BLACK ANODIZE. | 1/29/2016 | RJC | JAG |



10-24 UNC - 2B ∇ .60

$\phi .375^{+.001}_{-.000}$ ∇ .50



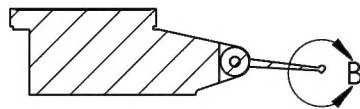
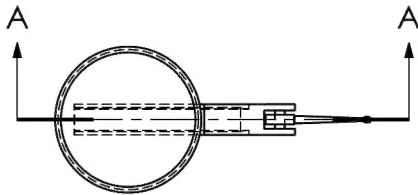
(-7)

INDICATOR BLOCK

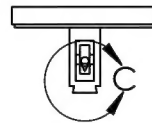
| | |
|---|---|
| DART AEROSPACE | |
| TITLE TEST FIXTURE SPRAG CLUTCH | |
| DWG NO. RBT18612-7 | REV 4 |
| MAT'L 6061 | UNLESS OTHERWISE SPECIFIED |
| HEAT TREAT | DIMENSIONS ARE IN INCHES |
| FINISH BLACK ANODIZE | .XXX \pm .005 FRACTIONS \pm 1/8 |
| SPEC MIL-A-8625, TYPE II, CLASS II | .XX \pm .01 ANGLES \pm .5° |
| DRAWN BY: CLOUGH | .X \pm .1 SURFACES = 125° |
| CHECKED: DUERFELDT | 1. BREAK ALL SHARP EDGES |
| OPPS APPR: ANDERSON | .015 x 45° OR .015R |
| QA APPR: LINDSAY | 2. DIMENSIONAL LIMITS APPLY |
| APPROVED: GILBERT | AFTER PLATING |
| SCALE 1:1 | 3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009 |
| DATE 1/29/2016 | USED ON MODEL |
| SHEET 5 OF 6 | MD |

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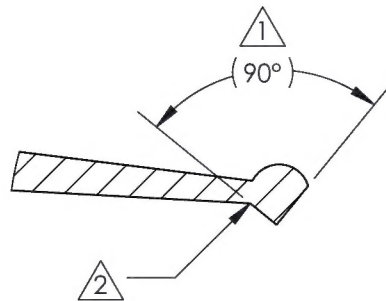
| REVISIONS | | | | | |
|-----------|---------|--|-----------|---------|----------|
| REV | ECR | DESCRIPTION | DATE | INITIAL | APPROVED |
| 4 | 16-0009 | -9 CH'D DESCRIPTION WAS TEST INDICATOR IS DIAL INDICATOR, ADDED NOTE ¹ & (90° DIM). | 1/29/2016 | RJC | JAG |



SECTION A-A



DETAIL C
SCALE 2 : 1



DETAIL B
SCALE 4 : 1



NOTE:

- ¹ MUST MAKE A SHARP POINT AND ANGLED DOWN.
- ² ACCEPTABLE TO CUT INTO SHAFT IF NEEDED, BE CAREFUL.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------------------------|-------|----------------------------|-------|--------------------------|--------|-----------------------------|------|------------------------|--|-------------------------|-----------|--------------------------|----------|---------------------|------------|-----------------------------|----------|---------------|-----------|------------------------------|--|------------------|--|---------------|--|----|
| DART AEROSPACE | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TITLE TEST FIXTURE SPRAG CLUTCH | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DWG NO. RBT18612-9 | REV 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td>MAT'L</td> <td>UNLESS OTHERWISE SPECIFIED</td> </tr> <tr> <td>TREAT</td> <td>DIMENSIONS ARE IN INCHES</td> </tr> <tr> <td>FINISH</td> <td>.XXX ± .005 FRACTIONS ± 1/8</td> </tr> <tr> <td>SPEC</td> <td>.XX ± .01 ANGLES ± .5°</td> </tr> <tr> <td></td> <td>.X ± .1 SURFACES = 125°</td> </tr> <tr> <td>DRAWN BY:</td> <td>1. BREAK ALL SHARP EDGES</td> </tr> <tr> <td>CHECKED:</td> <td>.015 x 45° OR .015R</td> </tr> <tr> <td>OPPS APPR:</td> <td>2. DIMENSIONAL LIMITS APPLY</td> </tr> <tr> <td>QA APPR:</td> <td>AFTER PLATING</td> </tr> <tr> <td>APPROVED:</td> <td>3. INTERPRET DIM AND TOL PER</td> </tr> <tr> <td></td> <td>ASME Y14.5M-2009</td> </tr> <tr> <td></td> <td>USED ON MODEL</td> </tr> <tr> <td></td> <td>MD</td> </tr> </table> | | MAT'L | UNLESS OTHERWISE SPECIFIED | TREAT | DIMENSIONS ARE IN INCHES | FINISH | .XXX ± .005 FRACTIONS ± 1/8 | SPEC | .XX ± .01 ANGLES ± .5° | | .X ± .1 SURFACES = 125° | DRAWN BY: | 1. BREAK ALL SHARP EDGES | CHECKED: | .015 x 45° OR .015R | OPPS APPR: | 2. DIMENSIONAL LIMITS APPLY | QA APPR: | AFTER PLATING | APPROVED: | 3. INTERPRET DIM AND TOL PER | | ASME Y14.5M-2009 | | USED ON MODEL | | MD |
| MAT'L | UNLESS OTHERWISE SPECIFIED | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TREAT | DIMENSIONS ARE IN INCHES | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FINISH | .XXX ± .005 FRACTIONS ± 1/8 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPEC | .XX ± .01 ANGLES ± .5° | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | .X ± .1 SURFACES = 125° | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DRAWN BY: | 1. BREAK ALL SHARP EDGES | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHECKED: | .015 x 45° OR .015R | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OPPS APPR: | 2. DIMENSIONAL LIMITS APPLY | | | | | | | | | | | | | | | | | | | | | | | | | | |
| QA APPR: | AFTER PLATING | | | | | | | | | | | | | | | | | | | | | | | | | | |
| APPROVED: | 3. INTERPRET DIM AND TOL PER | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | ASME Y14.5M-2009 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | USED ON MODEL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MD | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SCALE 1:2 | DATE 1/29/2016 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHEET 6 OF 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | |